

What's that noise?

We have received a number of complaints about noise from mining operations in the pit recently. We acknowledge that this is not good enough and we are urgently working on implementing a number of new noise reduction programmes.

What do we do currently to manage noise?

We make every reasonable effort to control noise and the effects of noise generated by our operations. The measures we currently have in place to manage noise effects include:

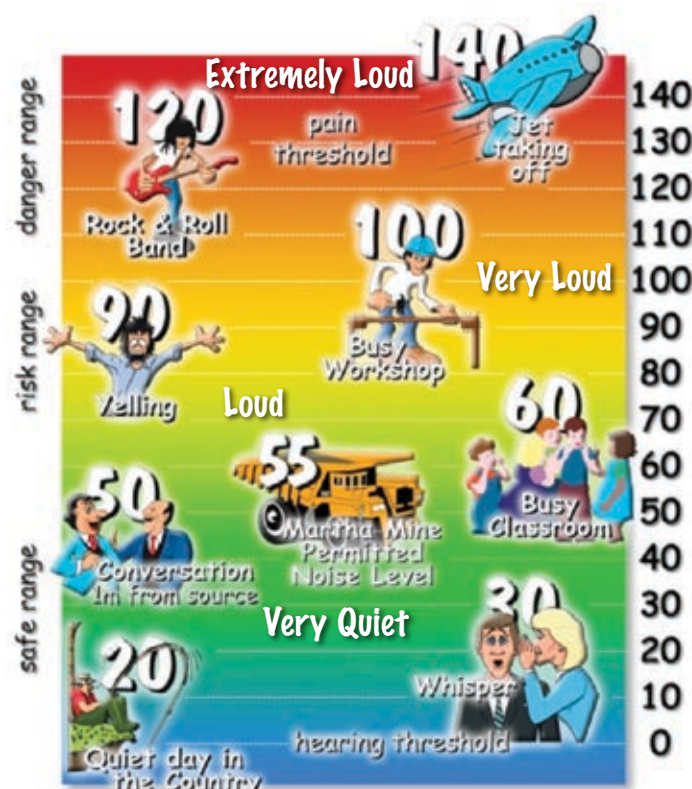
- Selecting and maintaining quieter equipment
- Replacing horns with cab-light message systems
- Constructing and planting noise bunds
- Controlling the height of stockpiles
- Installing acoustic noise wall and/or closed board fencing on some sections of perimeter noise bund.

What is dBA?

The basic unit of sound is the decibel (dB). The A-weighted sound level, or dBA, is a good environmental noise descriptor because the A scale replicates the sensitivity of the human ear. It can also be measured easily.

Humans can hear a change in sound pressure over a huge range from 1 (taken as the threshold of hearing) through to 100,000,000 (taken as the threshold of pain). To bring these numbers to a more manageable size a logarithmic scale is used. The scale becomes 0 to 140dBA.

Because the scale is logarithmic care must be taken when adding sound levels. Two equal noise sources raise the level of one source by 3dBA. It takes ten equal noise sources to raise the level of one source by 10dBA. As an example, a busy office generates a sound level of about 60dBA. Two such offices would increase the level by 3dBA and would be just noticeable, an increase of 5dBA would be clearly noticeable and an increase of 10dBA would be twice as loud. Correspondingly 40dBA, our limit for work in the evening, is actually half the level of noise as 50dBA.



The chart shows some typical noise levels.

What else are we doing or planning to do to reduce noise?

Recently we called in consultants to facilitate a noise workshop with our staff with a view to extending the range of actions to cut down noise. The meeting identified a number of new noise reduction actions that we have already begun to implement and construct. These include:

- Extending the noise bund further to the east
- Installing noise-absorbing curtains in front (west) of the crusher
- Shrouding the conveyor transfer station with noise-absorbing materials
- Installing a dampener over the extractor fan and a new exhaust system on an identified drill rig to muffle its engine noise
- Increasing attendance of operational staff in response to noise complaints to better enable us to pinpoint noise sources
- Preparing and implementing training packages to raise awareness among operators
- Redirecting the exhaust system on the main excavator
- Continuing to investigate noise improvements to enhance noise management

The consent conditions

Conditions relating to hours of work and noise are specified in the Mining Licence and the Hauraki District Council Land Use Consents. While the conditions vary depending upon what work is being carried out, and the time of day that the activity is taking place, the permitted conditions (abridged) relating to hours of work and noise are:

| ACTIVITY | HOURS OF WORK (MAX) | NOISE LEVEL |
|---|---|---|
| Normal mining operations, including underground and open pit mining, conveying and waste disposal | Mon. to Fri. 7.00am to *9.00pm Sat. 7.00am – midday | L ₁₀ ≤ 55 dBA or ≤ 50 dBA in specified areas |
| Maintenance | At any time outside the above hours provided noise levels are met | L ₁₀ ≤ 40 dBA |

*Work can be carried out between 7.00pm and 9.00pm if it is of an urgent nature and necessary for the effective carrying out of mining operations, and the noise conditions are met.

Sound monitoring – the standards

Sound monitoring is carried out in accordance with the relevant New Zealand standards for noise (NZS 6801: 1991 Measurement of Sound and NZS 6802: 1991 Assessment of Environmental Sound.) The consents state that monitoring results are valid when the monitoring takes place, in accordance with the standards, in “neutral met” conditions. This means the readings should not be influenced by weather. The standards acknowledge that measurements cannot reliably be made if the wind speed exceeds five metres per second. Five metres per second is equivalent to a gentle breeze.

Our company liaison officer is a first point of contact for anyone who has concerns or complaints about aspects of noise. Our free phone, 0800 NEWMONT, is staffed 24 hours a day, seven days a week.